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DEVELOPMENT OF INNOVATIVE WAYS OF EDUCATIONAL COMPLEX AND AUTOMATED MANAGEMENT OF ITS USE

Мазкур мақолада ўқув жараёнини осонлаштириш мақсадида электрон ўқув мажмуани яратиш ва тадбиқ этиш, уни ички ҳужжатларини тайёрлаш ва ривожлантириш, шунингдек, тайёрлаш ва талабаларга етказилишини соддалаштириш услублари кўрилиб чиқилган.

В данной статье описаны целесообразность электронного учебного комплекса в упрощении управлении учебным процессом, вопросы подготовки и создания материалов для электронного учебного комплекса, а также методы упрощения контента и распределения их в удобном для студентов режиме.

Keywords: *educational complex, electronic educational complex, design of educational materials and management.*

Nowadays, there is an ongoing reform of the education system of Uzbekistan, which is actively searched for ways of students' preparation improvement. One of them may be the improvement of methodological support of academic disciplines based on modern technologies, which combine traditional ways of organizing the educational process, tools and techniques generated by new ideological achievements of engineering.

Works of V.P.Bespalko, M.A.Galaguzova, I.V.Kostenko, B.V.Palchevskiy, G.V.Serdyuk, L.S.Friedman, N.D.Chekaleva, A.Stepanova, A.I.Arkipova and other are evidence of interest to the problem of improvement of methodological support of educational process.

Following aspects are covered in more detailed way:

- management of self-study of students (I.V.Kostenko, A.I.Rumyantsev, T.D.Stepuchyova);
- formation of students' motivation (O.S.Grebeshok, V.Krutikov);
- improvement of efficiency of educational process (A.F.Shepotin, Z.D.Shlyaher, A.S.Malahin);
- functions of learning tools in the educational-methodical complex (B.V.Palchevskiy, L.S.Friedman, S.I.Archangelskiy, A.I.Berg, N.V.Kuzmin, L.E.Solyankin);
- modeling of content of educational materials and use of classroom models (M.A.Galaguzova, G.V.Serduk, Y.N.Kulyutkin, E.I.Mashbitz, A.Stepanova) and others.

Local and foreign scientists on this subject mainly described pedagogical part and separately management of educational institution. So the study showed the absence of innovative ways of development of management in educational process.

All of these studies have important theoretical and practical significance. Their main goal is to achieve the level of success of educational programs, digestion and

getting, as a result, formed multifaceted developed specialist. This can be achieved by improving educational complex (EC) in various academic disciplines.

The management of the government pays great attention to the informatization of the entire state system, including higher education. From a psychological point of view, it is a query of time, then from an economic point of view it is reduction the amount of time professors and he cost of materials as paper, printing, etc.

Studying foreign experience, we can say that many institutions of higher education have already switched to online information transmission system of methodical support students.

All this has important theoretical and practical significance. Their main goal is to achieve success in development of educational programs and receive as a result formed multifaceted specialist. This can be achieved by improving educational complex in various academic disciplines.

Educational complex of disciplines is a set of standards, model and work programs (syllabus), educational-methodical materials, which are necessary for support and show the content, scope and level of educational and methodological support for each educational discipline.

As a rule, these materials develop the content of textbook with new original materials.

With educational complex of discipline solves the following issues [1]:

- educational and methodological support of each discipline;
- fulfillment of educational process with teaching and methodical, reference and other materials which improve the quality of preparation of specialists;
- implementation to the learning process of latest achievements of science;
- creation of a planning and organization works on improvement of educational and methodical basis of the university;
- preparation of materials for educational process - textbooks, manuals, guidelines.

In the modern information climate occurs rapid progress through the introduction of new technologies. Thus, knowledge and experience becoming outdated quickly, losing its former importance and relevance.

Large amount of professional knowledge with limited educational time and available literature is one of main existing problems, as well as students' ability to perceive the information they need. As a result, there is a need for extensive use of new approaches to the educational process, use of different teaching forms and methods of training of students as well as their constant updating.

In the third phase of the National Program for Personnel Training, which covers the current period, indicates the need for full satisfaction by latest educational and methodical complex and advanced teaching technologies, as well as ensuring computerization of educational process, complete coverage of continuing education system with computer and information networks, with access to the global information network.

In this regard, as well as with computerization and innovative processes in educational process, was formed opportunity to create and use advanced electronic instructional materials using information technologies.

But, in spite of the ever-growing level of computerization of education, it should be noted low efficiency of computer technology use in teaching process and lack of high-quality modern electronic materials in professional disciplines. In this regard, there is an urgent problem of educational process with innovative developments, relevant requirements of modern information technology.

Issues of creation of educational electronic publications, in particular, interactive and multimedia e-methodical complexes [2] are still the focus of professionals of educational institutions. One of reasons for the relentless close attention to the educational process is lack of universal technology to develop the necessary educational materials for the complex, including, absence of relevant standards.

In other hand, the current standard includes a very complicated process that could be simplified by separation on teaching and student content. For example, from about 20 positions today used in educational complexes, few items might be united to widely used abroad Syllabus, which briefly describes the contact details of the teacher, course schedule, hours allocated to lectures and practical (seminar) class, connectivity with other disciplines, importance and relevance goals and objectives of discipline, requirements for students, evaluation criteria and distribution of students' scores, as well as the base of literature for discipline.

It should be noted that the preparation and development of content of educational complexes is a creative process that is difficult to formalize and not amenable to automation, therefore requires a great deal of time by authors to develop courses.

Under electronic textbook understood thematically complete and detailed by the author structured learning material, which, via the Internet or on DVD and CD discs supplied to the student. Therefore electronic educational complex must contain the required self-study material, i.e. presentation, block of practical and case study tasks to monitor the acquired knowledge on a given topic and in-depth study, as well as other materials. In addition, unlike printed textbook, e-course should be designed in such a way that it is able to provide [3]:

- more detailed structure of course content;
- interactivity (including easy navigation) - ability to change the presentation of material depending on the actions of student, as well as ability to change the trajectory of learning;
 - hypertext structure of theoretical material in conceptual part of the course (links to definitions), as well as logical structure of presentation (sequence and relationship of parts);
 - Use of powerful illustrative materials - various drawings and pictures, animations and other multimedia applications;

- Use of variety practical and control measures to reinforce knowledge, self-control, monitoring and evaluation of embedded knowledge in an electronic textbook (tests, exercises, creative, individual and group assignments, etc.)
- availability of links (hyperlinks) in a variety of electronic text and graphical educational materials: literary and scientific materials, electronic libraries, dictionaries, encyclopedias and other educational and scientific resources available on the Internet.

To ensure the above qualities of the electronic textbook, the authors - developers of educational learning materials must take into account not only the requirements for methodical complex, but also have some knowledge on technology of designing content for the course and relevant skills.

The main problem is the quality of electronic textbooks and manuals. It is no coincidence, as technique of designing, creating and using electronic educational materials in the learning process is behind the development of information and telecommunication technologies. It is the quality of developed educational, teaching and methodical materials for electronic educational complex ultimately depends on efficiency of studying during their application.

Qualitatively developed electronic educational complex includes a complex of variety of materials and educational resources (training, teaching and supporting background material presented in various forms).

Such electronic educational complex must be primarily focused on the user to learn the subject himself, and specially differ by way of presentation (dialog and interactive form with a sufficient amount of questions and tasks for self-control, for example Case-studies).

Qualitatively prepared material for electronic educational complex, causing a relevant interest of students, motivation to work, not only because the course is presented in electronic form with elements of computer graphics and multimedia.

Working with electronic educational complex activates mental activity of the student: enhances concentration and intensity of attention, acutes sensitivity and powers of observation, increases memory to perceive educational material [4].

The quality of developed electronic educational complex depends on how its developers own method of training, skills, systematic approach to the design of electronic materials, the ability to use some means of information technologies, and so on.

Also, it is necessary to standardize the process to automatic mode. From above said, except presentations, case studies, training materials, all the rest should be prepared centrally, which allow better preparation of the material and versatility of its use.

Another point, all prepared materials necessary to put on the official websites of universities that allow students to use them online. The basis for this may serve as an electronic portal, created on basis of university's website, which will allow of students with their ID (identification number) and password to gain access to trained subjects.

In terms of cost savings, as well as under the Decree of the Cabinet of Ministers № 155 dated 22 July 2010 "On additional measures to save and sustainable

use of paper in the country," the creation of electronic educational complex will allow efficient use of paper, the effective use of information and communication technologies , elimination of red tape and bureaucracy, minimize excessive annual printing of educational materials, etc.

In an example of the Tashkent State University of Economics, where students are taught in more than 350 disciplines, every year on each discipline educational complex is prepared and printed, which costs approximately 400 sheets of paper and printing costs. The proposed measure of electronization and creation of electronic educational complex will significantly reduce paper consumption by 99%, limiting printing only by the paper version of educational and work program.

Thus, it should be noted that the challenge facing all authors on creation of electronic educational complex is relatively complex, diverse, extensive and time-consuming, but on the other hand, - relevant, creative and interesting in terms of methodological support of educational process in general, and in organization of independent work of students, as well as supporting the discipline that will be universal.

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